

PHOTOGRAPHY / GARRY BRYANT

Don Siglar of Los Angeles shows off a prototype electric vehicle and its innovative engine during a visit to Salt Lake City.

# "CURRENT" FUEL

## CARS STILL SPARKING INTEREST

■ **Voltage-propelled:** Although talk of electric cars surges and lapses, 'This time it's for real,' industry-newsletter editor says.

By Paul B. Johnson  
Deseret News staff writer

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NEWS EXTRA

Curses, "oiled" again. That's been the cry among electric-car proponents since the turn of the century, when the first voltage-propelled vehicles lost the market to the internal-combustion engine and cheap-burning gasoline.

Since then, talk of electric cars resurges every time gas prices rise significantly — at least until the market stabilizes and Detroit pulls the plug on the idea.

But now, with America's increasing reliance on foreign oil and the threat of ecological doomsday beneath the dark skies of pollution-choked horizons, global warming and acid rain, electric cars are once again creating sparks of interest.

"This time it's for real," said Larry Alexander, the editor of Electric Vehicle Progress, a bimonthly New York-based newsletter.

The primary catalyst for research on electric vehicles, or EVs, is tightening air quality legislation — primarily California's ruling last year mandating that zero-emission vehicles account for at least 2 percent of cars sold in the state in 1998. By 2003, that figure rises to 10 percent.

Powered by massive batteries, EVs are the only vehicles whose tailpipe emissions are nil



An early electric car and pioneering motorists stop in front of the Alta Club.

— they don't even have a tailpipe.

"The real driving force for electric vehicles, no pun intended ... is clean air," said Steve Meyer of Denver's Unique Mobility, a manufacturer of electric propulsion products. "Air quality is the issue."

"It's evident to me that every major manufacturer will have to market electric vehicles," said Don Moriarty of Futura Propulsion, a California company developing EVs for mass transit that intends to begin construction on a plant in Orem within 18 months.

In the past, electric vehicles didn't offer

much to be excited about in terms of performance. They were considered little more than glamorized golf carts.

But ongoing research is unveiling a wolf in sleek clothing. As Moriarty said, "There's so much rapid development it's almost breathtaking."

General Motors' all-electric, smoothly aerodynamic Impact, which may be on the market as early as 1993, can reportedly jump from 0 to 60 mph in eight seconds.

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AP photo

solid fuel in gaseous fuel.

California, traditionally the home of the nation's "gaggiest" metropolitan areas, passed tough air quality legislation last year that will require that zero-emission vehicles account for at least 2 percent of cars sold in the state in 1998. By 2003, that figure rises to 10 percent.

Several other states have adopted or are considering adopting California's strict air-quality standards. Although Utah's problem isn't nearly as severe, it's still bad enough that Salt Lake, Utah, Weber and Davis counties periodically don't meet federal clean air standards for harmful carbon monoxide.

Salt Lake and Utah counties also violate the ozone standard, which may be good stuff in the upper atmosphere but at ground level causes lung damage.

According to Barbara Cole, an environmental scientist with the Utah Division of Air Quality, 75 percent of the carbon monoxide and about 33 percent of the ozone along the Wasatch Front are attributable to the area's 750,000 automobiles.

And when it comes to particulates — tiny, invisible lung-clogging matter originating from cars, power

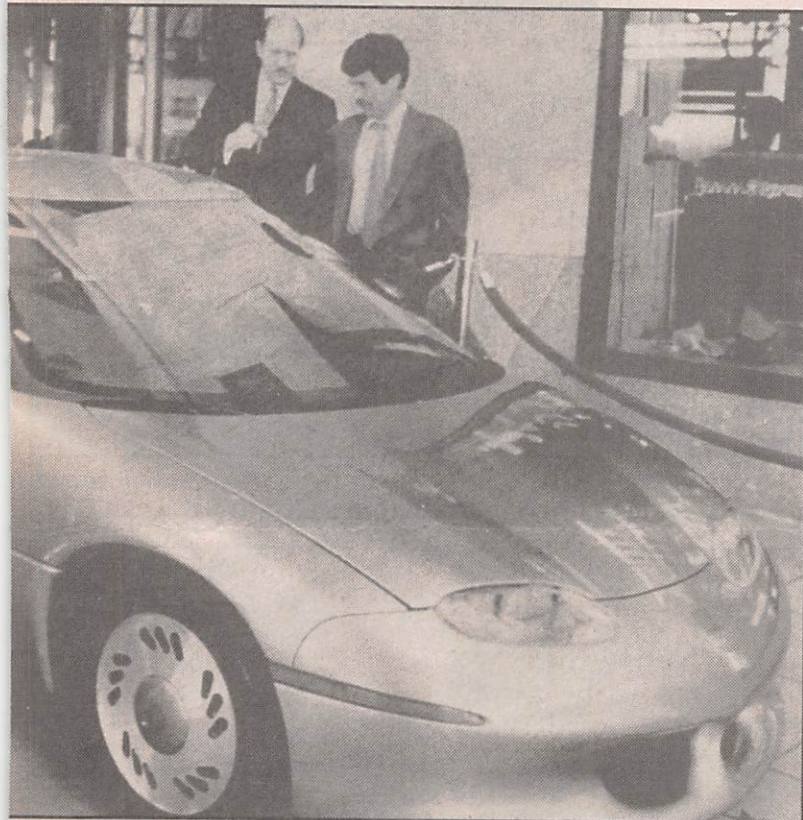
be part of the pollution solution. However, as Shelly Cordon Tauscher, associate rector of the Utah Petroleum Association, cautions, "The thing to remember about electric cars is electricity doesn't come from nowhere. It has to be generated."

With hydroelectric capabilities nearly fully realized, that leaves either coal, natural gas or nuclear power plants to generate the power.

"I'm not saying (EVs are) not a solution," she says. "I think they will be a part of the solution in the future."

And as Jim Rasmussen, a Salt Lake City researcher studying better batteries for use in EVs, said, "It's much easier to control emissions in a large power plant than thousands of smaller engines running around town."

However, Tauscher points out that the pollution problem may be overblown, and that the actual pollutants are not all gasoline vehicles but rather older, poorly tuned cars.



UPI photo

dynamic Impact may be on the market as early as 1993.



American Motors' Amitron raised interest and hopes in 1967.

and a range of 150 miles between charges.

The LA 301 and others like it may serve to be a good second car for short-distance commuters.

"This vehicle as it sits could meet the needs of thousands of people," Moriarty said of Futura's car.

Options to increase the range of EVs may be to have battery ex-

change programs at service stations or to use hybrid vehicles with both batteries and gasoline engines, as in GM's experimental HX3 five-passenger sedan.

And continuing improvements in technologies may bring long-lasting batteries as well as more efficient components and power supplies.



A parking-meter outlet refuels a 1968 Westinghouse car.

As new technologies continue to arrive, many believe American carmakers have to move quickly if they hope to secure the market in electric cars.

However, some doubt the Big Three's commitment. Moriarty feels the Impact may not arrive until 1996-97, three to four years after GM says it will. Ford and Chrysler each have limited experiments under works.

Meanwhile, as reported in Newsweek, Tokyo Electric Power Co. plans to unveil a prototype electric car powered by nickel-cadmium batteries that should achieve speeds of 110 miles per hour with a range of 310 miles. Nissan is also producing electric car prototypes.

Meyer of Unique Mobility, which announced plans in August to build electric drive trains for BMW electric cars, said, "My opinion is American carmakers will not

get into the electric car market unless they're dragged kicking and screaming."

BMW's car promises to be something to see, Meyer said. "It's a shocker. If you're a car buff, it will absolutely shake your foundation."

With Unique Mobility's patented lightweight drive system, in combination with sodium-sulfur batteries, the car is expected to achieve zero to 53 mph in 18 seconds with a top speed of 80 mph.

It may be marketed in Europe by the mid-'90s.

"America does have the capability to make world class products," Moriarty said. "The biggest obstacle is upper management. They are very limited in their ideas and vision. . . . They're in danger of losing the market to more aggressive foreign markets."

## Alternative fuels are now available and offer low-polluting competition

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Deseret News staff writer

net gallon of gasoline, but Elizondo said it sold in equivalent gallons that deliver the same gas mileage.

While electric cars are still in the research